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ANNUAL REPORT
OF THE
MCGILL UNIVERSITY, MONTREAL,
FOR THE YEAR 1879.

PRINTED BY PERMISSION OF HIS EXCELLENCY THE GOVERNOR
GENERAL, VISITOR OF THE UNIVERSITY.

*To His Excellency the Most Noble the Marquis of Lorne, Governor-
General of the Dominion of Canada :—*

MAY IT PLEASE YOUR EXCELLENCY :—

The Governors, Principal and Fellows of McGill University beg leave to present to Your Excellency, as Visitor on behalf of the Crown, the following Report on the condition and progress of the University, and of its colleges and schools, during the year ending December, 1879, beginning as usual with the Statistics of the past and present educational years.

The number of students in McGill College in the present session is as follows :

Students in Law,	-	-	-	-	-	77
Students in Medicine,	-	-	-	-	-	164
Students in Arts—Undergraduates,	-	-	-	-	-	93
“ “ —Partial and Occasional,	-	-	-	-	-	52
Students in Applied Science—Undergraduates,	-	-	-	-	-	19
“ “ “ —Partial,	-	-	-	-	-	11
Total,						416;

or deducting students entered in more than one Faculty, in all 412.

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The students in Morrin College, Quebec, are 9 in the Undergraduate course, and 10 Occasional.

The Students in St. Francis College, Richmond, are 10 in the Undergraduate course, and 8 Occasional.

The teachers in training in the McGill Normal School are 137. The pupils in the Model School of the Normal School are 343.

The total number of persons thus receiving educational benefits from the University is 929.

Of the students and teachers in training in McGill College and the Normal School, about 320 are persons not resident in Montreal, but attracted to it by the educational advantages offered by the University and its affiliated institutions.

At the meetings of Convocation, held in March and May last, the following degrees were conferred:—

Doctors of Laws	{	Honorary,	-	-	-	2
		In Course,	-	-	-	2
Doctors of Medicine,	-	-	-	-	-	37
Masters of Arts	{	In Course	-	-	-	3
		Ad Eundem	-	-	-	2
Bachelors of Civil Law,	-	-	-	-	-	21
Bachelors of Arts,	-	-	-	-	-	11

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The honorary degree of Doctor of Laws was granted to Francis Parkman, M.A., of Boston, and to Rev. John Jenkins, D.D., of Montreal. One candidate passed in the preliminary examination recently instituted for the degree of D. C. L.

At the close of the session, the following University Gold Medals were awarded to successful candidates:—The Elizabeth Torrance medal in Law, the Holmes medal in Medicine, the Chapman medal for Classics, the Anne Molson medal for Mathematics and Physical Science, the Prince of Wales medal for Mental and Moral Philosophy, the Shakespeare medal for English Literature, and the Logan medal for Geology and Natural Science. The Dufferin Prize in History, offered in room of the medal given for several years by His Excellency the Earl of Dufferin, was awarded to Wm. D. Lighthall, B.A., for his Essay on “the Great Rebellion of 1642.”

The income of the Hannah Willard Lyman fund has, as in

former years, been given in Prizes in the Examinations of the Ladies' Educational Association of Montreal, which, in the absence of a College for women, is carrying on, as far as possible, the objects contemplated by the donors of the fund.

At the close of the session of the McGill Normal School, in July, the following diplomas were granted by the Hon. the Superintendent of Education :—

For Academies,	-	-	-	-	-	11
For Model Schools,	-	-	-	-	-	37
For Elementary Schools,	-	-	-	-	-	44

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In the School Examinations of May last, forty-five candidates were successful ; of whom thirty-five passed as Associates in Arts, and ten for the Junior Certificate. Fourteen of the successful candidates were young women, and the candidates were sent up from seven schools, three of them in the city of Montreal. As compared with last year, the total number is less by two ; but, on the other hand, the number passed for the higher diploma of Associate in Arts, has increased from twenty-nine to thirty-five.

The total number of students of the University has remained nearly unchanged for the last three years. There has, however, in the Faculty of Arts, been a marked increase in the number of Undergraduates as compared with partial students. It is to be observed that all the students recognized in our lists are in actual attendance on lectures either in McGill College or in Morrin and St. Francis Colleges. Students in affiliated Theological Colleges are not reckoned unless attending classes in Arts, and students in Applied Science and in Medicine, attending classes in Arts, are reckoned only in the Faculties to which they belong.

The absence of graduates in Applied Science arose from the circumstance that the course had been extended from three to four years, and that all the students of the third year have continued their attendance for the fourth session.

In the McGill Normal School the number of students has increased, and the number of diplomas granted is larger than in any previous year. The demand for teachers trained in this school is now steadily increasing ; districts desirous of having

good schools, being anxious to secure the services of Normal School teachers. In illustration of this it may be stated that 86 teachers having Normal School diplomas are now employed by the Protestant Commissioners of Schools of the City of Montreal, and it has been ascertained that the average term of service of these teachers has been 5 1-6 years, which, considering the number of years the schools have been in full operation, and that some of these teachers have been employed in country schools before coming to the City, is a very high average. It has also been ascertained that at least 95 per cent. of those trained in the School obtain situations as teachers within a short time after leaving it. Nor are the benefits conferred by the Normal School limited to the work of those who take its diplomas. These teachers are the means of training many others, and thus of raising the general standing of the profession.

The total number of diplomas issued by the Normal School since its commencement is 1263, and the number of persons holding these diplomas is 886. It may be added that the McGill Normal School is in proportion to its results not one of the most expensive in the Dominion, its annual cost to the Province being a little over \$12,000, independently of Bursaries paid to Students.

The School Examinations for the Diploma of Associate in Arts, have been conducted successfully and harmoniously, under the joint auspices of this University and that of Bishop's College, Lennoxville. The Matriculation Examinations of the Universities have in consequence been assimilated, and it is hoped that before many years all the Academies and High Schools of the Province of Quebec may be induced to take the benefit of these examinations. In the examinations of May next, young women desirous of the higher title of Senior Associate in Arts, will have for the first time an opportunity to present themselves. This examination is equivalent to the Intermediate Examination of the University, and is the highest distinction which it can offer to women, until the establishment of a college for women, with a staff sufficient to give a higher training.

In September last, ten Exhibitions and Scholarships were awarded to successful competitors, of these 8 were the gift of W. C. McDonald, Esq., of Montreal, one of Mrs. Redpath, of Terrace

Bank, and one of the Board of Governors. Their values are from \$100 to \$125 annually, and they furnish most important aids to young men of ability in pursuing their education. An Anne Molson Mathematical prize of \$64 was also awarded. We have to thank the early English Text Society and the Shakespeare Society, for Prizes offered by them, and which will be competed for at the end of the present session.

The Scott Exhibition, the gift of the Caledonian Society of Montreal, was awarded as usual in the Faculty of Applied Science, and an additional Exhibition of \$50 was offered by the Dean of that Faculty.

In the Faculty of Law, several important changes affecting the composition of the Professorial body have been made by the Board of Governors. Four of the Senior members of the Faculty, Professors Abbott, Badgley, Laflamme and Carter, who have for some time been prevented by official and other duties from actively engaging in the work of instruction, have been placed on the list of Emeritus Professors ; while Messrs. Wurtele, Archibald, Lareau and Hutchinson, heretofore Associate Professors or Lecturers, take the rank of Professors. Mr. J. Emery Robidoux, B.C.L., has been appointed Associate Professor in Real Estate Law.

In the Faculty of Medicine, two important changes have occurred. The University loses the valuable services of Professor Craik, who has been under the necessity, from the pressure of professional engagements and impaired health, to resign the chair of Chemistry. For similar reasons, Professor Godfrey, who has ably filled the chair of Hygiene and public health, resigns his professorship. The duty of lecturing on Theoretical Chemistry in the Faculty of Medicine has in consequence been assigned to Dr. Girdwood, Professor of Practical Chemistry ; and as it did not appear to the Governors advisable to continue the Professorship of Hygiene as a separate chair, its duties have been assigned to Dr. Gardner, the Professor of Medical Jurisprudence.

No changes have occurred in the past year in the staff of the Faculty of Arts, or in that of the Faculty of Applied Science.

With reference to the Faculty of Applied Science, we regret our inability to report any steps toward providing it with the building accommodation which it requires, and its maintenance is still

to a considerable extent dependent on the precarious resource of annual subscription. The Education which it affords, more especially in the departments of Civil Engineering, Mechanical Engineering, Surveying, Mining, Assaying and Practical Chemistry, is so important with reference to the progress of this country in the higher departments of the arts, and of manufacturing industry, that it should commend itself to some benefactor or benefactors, who by the erection of a building and the endowment of one or more of the chairs, might place it in a position of greater security and efficiency, and thereby advance material interests of the highest importance to all sections of our population.

We have much pleasure in reporting the connection with the University by affiliation, of two additional Theological Colleges, the Wesleyan College of Montreal, and the Diocesan College of Montreal. All the Protestant Theological Colleges at present existing in this city, are thus connected with the University, in such a manner that they have representatives in its councils, and that their students may attend its classes and attain to its honours and distinctions. We may thus congratulate ourselves on the success and general approval of our non-denominational position, which, while it precludes us from having a Theological Faculty of our own, enables us to aid such Theological Colleges as may be established by any denomination of Christians.

Morrin College, Quebec, sent up last year only one candidate for the Intermediate Examination, and St. Francis College two. We hope that in the April examinations Morrin may send up three candidates for the Degree as well as some for the Intermediate. St. Francis expects to have four candidates for the Intermediate. Both colleges are, we have reason to believe, doing good educational work for their respective districts.

The Meteorological Observatory has, as heretofore, been conducted in connection with the Dominion Weather Service. Mr. McLeod, the Superintendent of the Observatory, has attended regularly to the telegraph service in connection with the Observatory at Toronto, has given reports to the public prints, and has instructed students of the senior years in Arts and Applied Science, in the practice of Meteorological Observations.

The University has received in the past year a most valuable

addition to its Astronomical Instruments from Charles S. Blackman, B. A., late of Montreal, now of New Haven, Connecticut. This donation includes a six and a quarter inch telescope, equatorially mounted, a large Transit Instrument, an Astronomical Clock, a Chronometer and a Sidereal Clock, beside other apparatus. These instruments have been properly placed in the Observatory and Transit House, and are used for giving time to the city as well as for educational purposes. The time service had previously been kept up by Mr. Blackman gratuitously, and is now continued by means of his generous donation to the University, and with the aid of small annual grants from the Harbor Commissioners and the City.

A descriptive list of the Blackman Astronomical instruments will be found in the Appendix.

The diminished income of the University, owing to the general financial depression, has prevented any additions in the past year to the Philosophical or Chemical Apparatus; and the only additions to the Library by purchase have been from the income of the William Molson Library Fund, and a portion of the Library Fees. Valuable gifts of books have been made by the McGill College Book Club, and by Dr. T. Sterry Hunt, F. R. S., besides a number of smaller donations, which have been noticed from time to time in the public prints. The total number of volumes, exclusive of those unbound, is now 17,586.

The Museum has been increased only by donations and by collection; and the William Molson Museum Fund has been devoted, as far as possible, to the work of cataloguing and arranging specimens, which are now laid aside in drawers as labelled, all the available space under glass being already crowded. They await the hoped-for extension of our Museum rooms.

Several important questions relating to University Degrees have occupied the attention of the Governors, Corporation and Faculties during the year.

Every opportunity has been taken to make known the views of the University as to the expediency of a Dominion Board of Registration of Medical Degrees, and of securing that reciprocity which shall enable graduates from the Colonies to practise in Great Britain, and which shall enable the profession here to

secure the advantage of the free admission of British Graduates to practice in Canada. Along with this, is the, perhaps still more important, object of breaking down those local restrictions which now impose obstacles to the removal of medical men from one Province to another, and restrict young men in their choice of the best medical schools.

In the last Session of the Provincial Legislature, a Bill was introduced by the Government, at the request of the Council of Public Instruction, and of the Universities, with the object of giving to the degree of Bachelor of Arts its proper value as a qualification for entering into the study of the learned professions, and thereby substituting as far as possible a regular education for a mere cram for examinations, and elevating the standard of preliminary education for the professions. The Bill was passed in the Lower House, but was abandoned owing to changes introduced in the Legislative Council, and which were considered to be destructive to the objects in view. It is hoped that the attempt will be renewed, more successfully, in the next Session of the Legislature. It is also much to be desired that provision should be made for the recognition of the matriculation examinations of the Professional Faculties of the Universities as equivalent to those of the Professional Examining Boards, and that arrangements should be made whereby the examinations required for admission to study in Law, Medicine, and the Notarial Profession should be assimilated to each other, and to the courses of study in the higher schools and colleges.

Much injury is at present done to general education by the various and discordant requirements of these examining boards; and in any case their interference is wrong in principle, since the work of preparatory instruction of a general character belongs properly to the Council of Public Instruction and to the Universities, and since the examinations conducted by professional men must always be uncertain and unfair, in comparison with those under the supervision of the higher institutions of learning, and conducted by experienced educators.

Another subject, happily within our own jurisdiction, is the regulation of the higher degrees in course, in such a manner as to make them more fully than heretofore objects of ambition, and

certificates of high literary or scientific standing. A Committee of Corporation has been occupied with this subject, and it is hoped that amended regulations, tending to attain these desirable ends, may be enacted in the course of the present year.

As the work of the University with reference to education in science, and the interests of science generally in this Province, seemed likely to be injuriously affected by the contemplated removal of the Geological Survey, it was thought advisable by the Board of Governors to address a letter to the Minister of the Interior, stating our views on the subject, and offering, in case the removal should be determined on, to accommodate for the use of students and the public such portion of the collections as it might be deemed expedient to leave in this city. Should the Government find it expedient to avail itself of this offer, the University will endeavor to make the best possible use, for the benefit of education and science, of such specimens as may be placed in its keeping.

We express the feeling of every member of the University in cordially thanking Your Excellency for the practical interest in our work manifested by a handsome donation to the funds of the Faculty of Applied Science, and by the gift of a Gold and Silver Medal for competition in the University.

With the approval of Your Excellency, the Gold Medal has been offered for the highest standing in an Honour Course in Modern Languages and History, and the Silver Medal as the highest prize in the graduating class in the Faculty of Applied Science. The first competition for these medals will take place in the examination of April next.

The present session is the forty-seventh of the existence of this University, so that in the session of 1882-3 it will have completed its fiftieth year,—an event perhaps entitled to some fitting celebration. Twenty-seven years have now elapsed since the revival of the University under an amended charter; and of the gentlemen who initiated that movement, and as the first Board of Governors under the new charter, undertook the arduous task of restoring the financial position and educational work of an institution then almost destitute of revenue and burdened with debt, only four survive to see the result of their

labours thus far. The present is also the twenty-fifth session since the full organization of the University under the present Principal and an adequate staff of professors in the Faculty of Arts.

The progress made within the quarter of a century, since the re-organization of the University, though less than our more ardent friends may have wished, affords reason for congratulation and thankfulness. It may be summed up under the following heads :—

1st. A body of nearly 1,200 Graduates sent forth into the active work of life in all parts of the Dominion, and many of whom have already risen to high positions in the Church, in the Government, in professional life, and in scientific, literary and educational work.

2nd. The establishment of the new Faculty of Applied Science, and the complete organization of the other Faculties, with a staff of thirty-four professors and lecturers actually engaged in the work of instruction, of whom six are gentlemen of eminence in their departments, introduced to this country through the agency of the University, and nineteen are graduates of the University, trained in our own halls, though some of them with the additional advantage of study pursued abroad.

3rd. The establishment of the McGill Normal School, which has conferred so important benefits on education by sending forth more than 800 teachers into our schools.

4th. The connection with the University of six Affiliated Colleges, all of them deriving benefit from it, and carrying on important educational work of their own.

5th. The successful institution of University School Examinations, which, if at present only on a small scale, must eventually constitute a powerful lever for the elevation of education.

6. The accumulation of considerable Endowments of Chairs, of Scholarships, of Medals and Prizes, the completion of the College buildings in such a manner as to permit the work of higher education to be carried on satisfactorily in the Faculties of Arts and Medicine, though the other Faculties are still unprovided; and the accumulation of large collections of valuable Physical and other Apparatus, of extensive collections in Natural History and of a valuable Library.

All this, and much more, in connection with the financial prosperity of the University and the formation and growth of its statutes and regulations, has not been accomplished without much effort and many sacrifices, nor without the aid of many generous benefactors ; but it has been carried out with the utmost harmony, and our history has been unmarked either by misconduct or failure on the part of those holding offices in the University, or by any serious disorder or breach of discipline. The arrangements of the University have not been slavishly borrowed from those of any other ; but in every new enterprise, while giving due consideration to the precedents established by older institutions, we have had regard to the circumstances and wants of this country. We have thus often had the gratification to find that methods and arrangements introduced here, have commended themselves to the approval and imitation of other institutions, both in this country and abroad.

One special feature of McGill University, deserving of notice in this connection, is its independence, and freedom from denominational and sectional control. Founded by a private benefaction conceived in the broadest spirit of liberality, sustained by endowments given by benefactors of all denominations, and controlled only by the powers which have been reserved by the Crown in the Royal Charter, and which are exercised by the Governor-General as Visitor, it has been enabled to attain to a position and sphere of usefulness Canadian rather than Provincial, and to pursue its development without any external interference other than that imposed by its limited resources ; and, at this moment, it may be affirmed to realize, perhaps more than any other, the idea of a broad and liberal University for the whole Dominion, and deserving of aid and encouragement from friends of education, independently of creed and locality.

On behalf of the Corporation,

(Signed), CHARLES DEWEY DAY, LL.D.,

Chancellor.

APPENDIX.

DESCRIPTIVE CATALOGUE OF THE BLACKMAN ASTRONOMICAL INSTRUMENTS.

The Telescope has a focal length of seven feet, and a $6\frac{1}{4}$ inch aperture. It is provided with 1 terrestrial, 1 zenith and seven celestial Eye-pieces. The Object-glass is by H. G. Fitz, of New York, and the mounting by W. T. Gregg, of the same city. The Declination circle is 6 inches in diameter, and is graduated to read to minutes of arc. The Right Ascension circle is of the same diameter, and reads to 6 seconds of time. The motions in declination and R. A. are both fast (friction), and slow (tangent screws with handles). The finder has an aperture of 2 in.

To accommodate this instrument, the tower of the Observatory was partially rebuilt, and a new pier carried up from seven feet below the surface of the ground to a total height of 31 ft. 2 in. The pier is entirely free from connection with the building, and the telescope is thus protected from many vibrations to which a house is subject. The cylindrical form of dome was adopted for the Equatorial Room. The dome is rotated on iron balls, rolling between two iron troughs, or grooves. The lower portion of the tower is used as a clock and electrical apparatus-room.

The Mean-time Clock is by Howard, of Boston, with Denison Gravity Escapement, and zinc and steel pendulum compensation. It is provided with electric attachments for minutes and seconds contact.

The Transit Instrument by Jones & Son, of Charing Cross, London, is of a $\frac{1}{4}$ in. aperture, and 42 inches focal length. It is mounted on a solid stone pier, and is sheltered by a small wooden building. The position of this instrument was of course chosen so as to obtain the best possible view of the Meridian. It is situated about seventy feet to the east of the main Observatory building.

The Sidereal Clock is mounted in the transit house, where are also an electric dial, or seconds jumper, and a minute-breaker, which are in connection with the Mean-time Clock.

A Second-dial and Minute-breaker are also placed in the equatorial room.

STATEMENT OF THE REVENUE AND EXPENDITURE OF THE ROYAL INSTITUTION for the Advancement of Learning, for the year, from 1st of August, 1878, to 31st of July, 1879.

Government Grants:—

REVENUE.

Provincial	\$ 2,500.00
Superior Education Fund	1,650.00
Dominion Grant to Observatory	\$700
Allowance to Observers	1,000.00
	5,150.00

Scholastic Fees:—

Faculty of Arts	674.00
“ “ of Applied Science	215.00
Botany and Zoology	1,206.50
Library	190.00
Gymnasium	658.00
Registration	252.60
School Examinations	280.00
	174.69
	3,470.69

Annual Donations:—

Faculty of Applied Science	2,558.67
Scholarships and Exhibitions	1,627.18
Interests on Medals and Prizes	431.76
	4,617.61

College Grounds:—Admission.

Enowment, Interest and Rents:—	165.00
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Due and accrued to date, including arrears from former years	42,276.48
Received this year on same	23,307.28
Leaving uncollected arrears of	18,969.20
Of which are being capitalized	11,801.00
Balance collectable for revenue of which \$2,824.22 are in arrears on this previous Year	7,468.20

EXPENDITURE.

Administration:—

University acc, Salaries Principal Secretary and Clerk	\$ 4,414.58
Office Expenses	166.29
Porters' Salaries	1,137.96
	\$ 5,445.83

General Expenses:—

Insurance—Two years' Premium in advance accepted for a three years' risk	1,299.60
Travel	735.52
Printing	1,200.61
Advertising	697.09
Stationery	256.36
Charges including Gibson Annuity	1,187.78
Law Charges	104.35
College Repairs	817.65
College Grounds—Labour and expenses of Maintenance including extraordinary repairs to Band Stand and replacing Old Gates	601.70
	6,500.66

Education:—

Departure of Law	1,697.13
“ “ Arts	18,122.97
“ “ Applied Science	6,852.71
University Examiners	7,800.00
Observatory	1,086.94
Natural Philosophy Class	384.7
School Examinations	1,297.25
Diplomas	405.30
Gymnasium	28,511.24

Scholarships and Exhibitions

Medals and Prizes	1,576.00
	2,346.12

Library—Maintenance and Assistance

Purchase and binding of Books—from fees and funds	1,061.85
Improvements and Additions:—	1,351.44

Museum—from fees and funds	382.70
Philosophical Apparatus	121.43
Chemical Laboratory	1.80
Fixtures and Furniture	81.20
Library Above Extension	631.80
College Grounds—For New Seats and Lawn Mower	161.00
	1,360.93

Total Revenue receipts

Capital Account received for re-investment	\$36,580.58
Overdraft on Bank acc.	5,131.59
Less Overdraft 1st August, 1878	5,130.39
	10,261.88

Special Savings Bank Balances

Medals and Prizes	451.49
	684.41
	1,135.90

\$47,978.46

Total Expenditure

Balances on hand 31st July, 1879	\$46,887.07
Special Savings Bank acc.	307.00
Medals and Prizes	784.39
	1,001.39
	\$47,978.46

